

## THOMAS M. BROWN – PUBLICATIONS

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### REFEREED PAPERS

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**Brown, T.M.**, Lanz, T., Sweigart, A.V., Cracraft, M., Hubeny, I., & Landsman, W.B. 2012, *Flash Mixing on the White Dwarf Cooling Curve: Spectroscopic Confirmation in NGC 2808*, *ApJ*, **748**, 85.

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Grogin, N.A., et al., 2011, *CANDELS: The Cosmic Assembly Near-infrared Deep Extragalactic Legacy Survey*, *ApJS*, **197**, 35.

Radburn-Smith, D.J., de Jong, R.S., Seth, A.C., Bailin, J., Bell, E.F., **Brown, T.M.**, Bullock, J.S., Courteau, S., Dalcanton, J.J., Ferguson, H.C., Goudfrooij, P., Holfeltz, S., Holwerda, B.W., Purcell, C., Sick, J., Streich, D., Vlajic, M., & Zucker, D.B. 2011, *The GHOSTS Survey. I. Hubble Space Telescope Advanced Camera for Surveys Data*, *ApJS*, **195**, 18.

Clarkson, W.I., Sahu, K.C., Anderson, J., Rich, R.M., Smith, T.E., **Brown, T.M.**, Bond, H.E., Livio, M., Minniti, D., Renzini, A., & Zoccali, M. 2011, *The First Detection of Blue Straggler Stars in the Milky Way Bulge*, *ApJ*, **735**, 37.

Jeffery, E.J., Smith, E., **Brown, T.M.**, Sweigart, A.V., Kalirai, J., Ferguson, H.C., Guhathakurta, P., Renzini, A., & Rich, R.M. 2011, *HST/ACS Observations of RR Lyrae Stars in Six Ultra-deep Fields of M31*, *AJ*, **141**, 171.

**Brown, T.M.**, Sahu, K., Anderson, J., Tumlinson, J., Valenti, J.A., Smith, E., Jeffery, E.J., Renzini, A., Zoccali, M., Ferguson, H.C., Vandenberg, D.A., Bond, H.E., Casertano, S., Valenti, E., Minniti, D., Livio, M., & Panagia, N. 2010, *The WFC3 Galactic Bulge Treasury Program: Metallicity Estimates for the Stellar Population and Exoplanet Hosts*, *ApJ*, **725**, L19.

Siana, B., Teplitz, H.I., Ferguson, H.C., **Brown, T.M.**, Giavalisco, M., Dickinson, M., Chary, R.-R., de Mello, D.F., Conselice, C.J., Bridge, C.R., Gardner, J.P., Colbert, J.W., & Scarlata, C. 2010, *A Deep HST Search for Escaping Lyman Continuum Flux at  $z \sim 1.3$ : Evidence for an Evolving Ionizing Emissivity*, *ApJ*, **723**, 241.

Bridge, C.R., Teplitz, H.I., Siana, B., Scarlata, C., Conselice, C.J., Ferguson, H.C., **Brown, T.M.**, Salvato, M., Rudie, G.C., de Mello, D.F., Colbert, J., Gardner, J.P., Giavalisco, M., & Lee, A. 2010, *A Spectroscopic Search for Leaking Lyman Continuum at  $z \sim 0.7$* , *ApJ*, **720**, 465.

**Brown, T.M.**, Sweigart, A.V., Lanz, T., Smith, E., Landsman, W.B., & Hubeny, I. 2010, *The Blue Hook Populations of Massive Globular Clusters*, *ApJ*, **718**, 1332.

**Brown, T.M.**, Smith, E., Ferguson, H.C., Guhathakurta, P., Kalirai, R.A., Kimble, R.A., Renzini, A., Rich, R.M., Sweigart, A.V., & Vandenberg, D.A. 2009, *Deep Optical Photometry of Six Fields in the Andromeda Galaxy*, *ApJS*, **184**, 152.

**Brown, T.M.**, Sahu, K., Zoccali, M., Renzini, A., Ferguson, H.C., Anderson, J., Smith, E., Bond, H.E., Minniti, D., Valenti, J.A., Casertano, S., Livio, M., Panagia, N., Vandenberg, D.A., & Valenti, E. 2009, *The WFC3 Galactic Bulge Treasury Program: A First Look at Resolved Stellar Population Tools*, *AJ*, **137**, 3172.

- Brown, T.M.**, Beaton, R., Chiba, M., Ferguson, H.C., Gilbert, K.M., Guhathakurta, P., Iye, M., Kalirai, J.S., Koch, A., Komiyama, Y., Majewski, S.R., Reitzel, D.B., Renzini, A., Rich, R.M., Smith, E., Sweigart, A.V., & Tanaka, M. 2008, *The Extended Star Formation History of the Andromeda Spheroid at 35 Kpc on the Minor Axis*, [ApJ, 685, L121](#).
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- Brown, T.M.**, Smith, E., Ferguson, H.C., Sweigart, A.V., Kimble, R.A., & Bowers, C.W. 2008, *The Dearth of UV-Bright Stars in M32: Implications for Stellar Evolution Theory*, [ApJ, 682, 319](#).
- Zech, W.F., Lehner, N., Howk, J.C., Dixon, W.V.D., & **Brown, T.M.** 2008, *The High Velocity Gas toward Messier 5: Tracing Feedback Flows in the Inner Galaxy*, [ApJ, 679, 460](#).
- Siana, B., Teplitz, H.I., Colbert, J., Ferguson, H.C., Dickinson, M., **Brown, T.M.**, Conselice, C.J., de Mello, D.F., Gardner, J.P., Giavalisco, M., & Menanteau, F. 2007, *New Constraints on the Lyman Continuum Escape Fraction at  $z=1.3$* , [ApJ, 668, 62](#).
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- Brown, T.M.**, Smith, E., Ferguson, H.C., Guhathakurta, P., Kalirai, J.S., Rich, R.M., Renzini, A., Sweigart, A.V., Reitzel, D., Gilbert, K.M., & Geha, M. 2007, *The Extended Star Formation History of the Andromeda Spheroid at Twenty One Kiloparsecs on the Minor Axis*, [ApJ, 658, L95](#).
- Brown, T.M.**, Smith, E., Ferguson, H.C., Rich, R.M., Guhathakurta, P., Renzini, A., Sweigart, A.V., & Kimble, R.A. 2006, *The Detailed Star Formation History in the Spheroid, Outer Disk, and Tidal Stream of the Andromeda Galaxy*, [ApJ, 652, 323](#).
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- Brown, T.M.**, Smith, E., Guhathakurta, P., Rich, R.M., Ferguson, H.C., Renzini, A., Sweigart, A.V., & Kimble, R.A. 2006, *Deep Photometry of Andromeda Reveals Striking Similarities in the Tidal Stream and Spheroid Populations*, [ApJ, 636, L89](#).
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**Brown, T.M.** 2004, *The UV Upturn: From M32 to Distant Clusters*, [Ap&SS](#), **291**, 215.

Sweigart, A.V., Lanz, T., **Brown, T.M.**, Hubeny, I., & Landsman, W.B. 2003, *Evidence for Flash Mixing in He-rich sdB Stars*, [Ap&SS](#), **291**, 367.

**Brown, T.M.**, Ferguson, H.C., Smith, E., Kimble, R.A., Sweigart, A.V., Renzini, A., Rich, R.M., & Vandenberg, D.A. 2003, *Evidence for a Significant Intermediate-Age Population in the M31 Halo from Main Sequence Photometry*, [ApJ](#), **592**, L17.

**Brown, T.M.**, Ferguson, H.C., Smith, E., Bowers, C.W., Kimble, R.A., Renzini, A., & Rich, R.M. 2003, *Far-Ultraviolet Emission from Elliptical Galaxies at  $z=0.33$* , [ApJ](#), **584**, L69.

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**Brown, T.M.**, Sweigart, A.V., Lanz, T., Landsman, W.B., & Hubeny, I. 2001, *Flash Mixing on the White Dwarf Cooling Curve: Understanding Hot Horizontal Branch Anomalies in NGC 2808*, [ApJ](#), **562**, 368.

Williams, R.E., Baum, S., Bergeron, L.E., Bernstein, N., Blacker, B.S., Boyle, B.J., **Brown, T.M.**, Carollo, C.M., Casertano, S., Covarrubias, R., de Mello, D.F., Dickinson, M.E., Espey, B.R., Ferguson, H.C., Fruchter, A., Gardner, J.P., Gonnella, A., Hayes, J., Hewett, P.C., Heyer, I., Hook, R., Irwin, M., Jones, D., Kaier, M.E., Levay, Z., Lubenow, A., Lucas, R.A., Mack, J., MacKenty, J.W., Madau, P., Makidon, R.B., Martin, C.L., Mazzuca, L., Mutchler, M., Norris, R.P., Perriello, B., Phillips, M.M., PPostman, M., Royle, P., Sahu, K., Savaglio, S., Sherwin, A., Smith, T.E., Stiavelli, M., Suntzeff, N.B., Teplitz, H.I., van der Marel, R.P., Walker, A.R., Weymann, R.J., Wiggs, M.S., Williger, G.M., Wilson, J., Zacharias, N., & Zurek, D.R. 2000, *The Hubble Deep Field South: Formulation of the Observing Campaign*, [AJ](#), **120**, 2735.

Gardner, J.P., **Brown, T.M.**, & Ferguson H.C. 2000, *Ultraviolet Galaxy Counts from STIS Observations of the Hubble Deep Fields*, [ApJ](#), **542**, L79.

**Brown, T.M.**, Kimble, R.A., Ferguson, H.C., Gardner, J.P., Collins, N.R., & Hill, R.S. 2000, *Measurements of the Diffuse Ultraviolet Background and the Terrestrial Airglow with the Space Telescope Imaging Spectrograph*, [AJ](#), **120**, 1153.

**Brown, T.M.**, Bowers, C.W., Kimble, R.A., Sweigart, A.V., & Ferguson, H.C. 2000, *Detection and Photometry of Hot Horizontal Branch Stars in the Core of M32*, [ApJ](#), **532**, 308.

**Brown, T.M.**, Bowers, C.W., Kimble, R.A., & Ferguson, H.C. 2000, *Far-Ultraviolet Emission from Elliptical Galaxies at  $z=0.55$* , [ApJ](#), **529**, L89.

Gardner, J.P., J.P., Baum, S.A., **Brown, T.M.**, Carollo, C.M., Christensen, J., Dashevsky, I., Dickinson, M.E., Espey, B.R., Ferguson, H.C., Fruchter, A.S., Gonnella, A.M., Gonzalez-Lopezlira, R.A., Hook, R.N., Kaiser, M.E., Martin, C.L., Sahu, K.C., Savaglio, S., Smith, T.E., Teplitz, H.I., Williams, R.E., & Wilson, J. 2000, *The Hubble Deep Field South - STIS Imaging*, [AJ](#), **119**, 486.

Yi, S., **Brown, T.M.**, Heap, S., Hubeny, I., Landsman, W., Lanz, T., & Sweigart, A. 2000, *On the Age Estimation of LBDS 53W091*, [ApJ](#), **533**, 670.

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**Brown, T.M.**, Ferguson, H.C., Deharveng, J.-M., & Jedrzejewski, R.I. 1998, *Measurements of Far-UV Emission from Elliptical Galaxies at  $z=0.375$* , [ApJ](#), **508**, L139.

**Brown, T.M.**, Ferguson, H.C., Stanford, S.A., & Deharveng, J.-M. 1998, *Color-Luminosity Relations for the Resolved Hot Stellar Populations in the Centers of M31 and M32*, [ApJ](#), **504**, 113.

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Mitchell, K.J., Saffer, R.A., Howell, S.B., & **Brown, T.M.** 1998, *A New Sample of Faint B Stars in the Galactic Halo*, [MNRAS](#), **295**, 225.

**Brown, T.M.**, Ferguson, H.C., Davidsen, A.F. & Dorman, B. 1997, *A Far Ultraviolet Analysis of the Stellar Populations in Six Elliptical and S0 Galaxies*, [ApJ](#), **482**, 685.

**Brown, T.M.**, Ferguson, H.C., & Davidsen, A.F. 1996, *A Grid of Model Atmospheres and Synthetic Spectra for the Far Ultraviolet Analysis of Old Stellar Populations*, *ApJ*, 472, 327.

**Brown, T.M.**, Ferguson, H.C., & Davidsen, A.F. 1995, *Hopkins Ultraviolet Telescope Observations of Six Elliptical and S0 Galaxies*, *ApJ*, 454, L15.

**Brown, T.M.**, Buss, R.H., Jr., Grady, C., & Bjorkman, K. 1995, *The Growth of Solids, Destruction of Molecules, and Shielding of Radiation in the Young Stellar Disk of HD 45677*, *ApJ*, 440, 865.

Buss, R.H., Jr., Allen, M., McCandliss, S., Kruk, J., Liu, J.-C., & **Brown, T.M.** 1994, *Evolution of Macromolecular Dust: Far Ultraviolet Spectral Dust Extinction and Gas Absorption of Stellar Light as Measured with the Hopkins Ultraviolet Telescope*, *ApJ*, 430, 630.

**Brown, T.**, Cordova, F., Ciardullo, R., Thompson, R., & Bond, H. 1994, *Einstein Observations of Ultrasoft X-ray Sources in the Magellanic Clouds*, *ApJ*, 422, 118.

#### CONFERENCE SPEAKING

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*Insights from HST into the Formation of the Ultra-Faint Dwarf Galaxies*, in “Stellar Populations Across Cosmic Times,” Paris, France, June 2012. Invited.

*Star Formation Histories in Andromeda*, in “The Martin Schwarzschild Centennial Meeting,” Princeton, USA, June 2012. Invited.

*Stars and Stellar Populations with a 4 to 8m UV/Optical Space Telescope*, in “Cosmic Origins Program Analysis Group,” Baltimore, USA, September 2011. Invited.

*New Observational Evidence for Flash Mixing on the White Dwarf Cooling Curve*, in “The Fifth Meeting on Hot Subdwarf Stars & Related Objects,” Stellenbosch, South Africa, July 2011. Contributed.

*Early Results from the WFC3 Galactic Bulge Treasury Program*, in “Stellar Lives,” Victoria, Canada, May 2011. Invited.

*The WFC3 Galactic Bulge Treasury Program*, in “Science With the Hubble Space Telescope III – Two Decades and Counting,” Venice, Italy, October 2010. Contributed.

*The History of Star Formation in Galaxies*, in “Beyond JWST: The Next Steps in UV-Optical-NIR Space Astronomy,” Baltimore, USA, March 2009. Invited.

*The Star Formation Histories of the M31 and M33 Spheroids*, in “Galaxy Evolution: Emerging Insights and Future Challenges,” Austin, USA, November 2008. Invited.

*Star Formation Histories in the Andromeda Galaxy*, in “The 211th Meeting of the American Astronomical Society,” Austin, USA, January 2008. Invited.

*Star Formation Histories in Andromeda*, in “Galaxies and Structures Through Cosmic Time,” Venice, Italy, March 2006. Invited.

*Star Formation Histories in Andromeda*, in “Stellar Populations - A Rosetta Stone for Galaxy Formation,” Ringberg Castle, Germany, July 2005. Invited.

*Resolved Stellar Populations in Andromeda*, in “Resolved Stellar Populations,” Cancun, Mexico, April 2005. Invited.

*Star Formation Histories in Andromeda*, in “Structure and Evolution of the Milky Way and Its Surroundings,” Ringberg Castle, Germany, December 2004. Invited.

*Star Formation Histories in the Local Group*, in “Wide Field Imaging from Space,” Berkeley, USA, May 2004. Contributed.

*The UV Upturn: From M32 to Distant Clusters*, in “Extreme Horizontal Branch Stars and Related Objects,” Staffordshire, UK, June 2003. Contributed.

*The Star Formation History of the Andromeda Halo*, in “The Local Group as an Astrophysical Laboratory,” Baltimore, USA, May 2003. Invited.

*Mapping the Star Formation History of the Local Group with NHST*, in “The 202nd Meeting of the American Astronomical Society,” Nashville, USA, May 2003. Invited.

*Measurements of the UV Upturn in Local and Intermediate Redshift Ellipticals*, in “Spectrophotometric Dating of Stars and Galaxies,” Annapolis, USA, April 1999. Invited.

*Color-Luminosity Relations for the Resolved Hot Stellar Populations in the Centers of M31 and M32*, in “IAU 192: The Stellar Content of Local Group Galaxies,” Cape Town, South Africa, September 1998. Contributed.

*A Far Ultraviolet Analysis of the Stellar Populations in Elliptical and S0 Galaxies*, in “The 189th Meeting of the American Astronomical Society,” Toronto, Canada, January 1997. Contributed.

*A Far Ultraviolet Analysis of the Stellar Populations in Six Elliptical and S0 Galaxies*, in “The Second Stromlo Symposium -- The Nature of Elliptical Galaxies,” Canberra, Australia, August 1996. Contributed.

#### RECENT SEMINARS AND COLLOQUIA

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*Star Formation Histories in the Local Universe*. NRC-HIA, May, 2011.

*Star Formation Histories in the Andromeda Galaxy*. University of Massachusetts, March 2009.

*Star Formation Histories in the Andromeda Galaxy*. University of Toledo, January 2009.

*The Formation History of the Andromeda Galaxy*. University of Washington, March 2007.

*The Formation History of the Andromeda Galaxy*. STScl, February 2007.

*The Formation History of the Andromeda Galaxy*. Yale, January 2007.

*The Formation History of the Andromeda Galaxy*. University of Virginia, October 2006.

*Star Formation Histories in Andromeda*. NASA/GSFC, February 2006.

*Star Formation Histories in Andromeda*. University of California Santa Cruz, October 2005.

*Star Formation Histories in Andromeda*. The Johns Hopkins University, March 2005.

*The Age of the Andromeda Halo*. Michigan State University, October 2004.

*The Age of the Andromeda Halo*. University of Pennsylvania, October 2004.

*The Star Formation History in the Andromeda Halo.* The Pennsylvania State University, April 2004.

*The Star Formation History in the Andromeda Halo.* NASA/GSFC, February 2004.

*Using Hot Stars to Trace the Evolution of Old Galaxies.* NASA/GSFC, October 2002.

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FIRST-AUTHORED TECHNICAL PAPERS

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Brown, T.M. 2008, *WFC3 Instrument Science Report 2008-49: WFC3 TV3 Testing: Red Leak Checks for the UV Filters.*

Brown, T.M. 2008, *WFC3 Instrument Science Report 2008-48: WFC3 TV3 Testing: System Throughput on the UVIS Build 1' Detector.*

Brown, T.M. 2008, *WFC3 Instrument Science Report 2008-11: WFC3 ETC Update.*

Brown, T.M., Hartig, G., & Baggett, S. 2008, *WFC3 Instrument Science Report 2008-10: WFC3 TV3 Testing - UVIS Window Contamination.*

Brown, T.M. 2008, *WFC3 Instrument Science Report 2008-09: WFC3 TV3 Testing - IR Channel Throughput.*

Brown, T.M. 2008, *WFC3 Instrument Science Report 2008-08: WFC3 TV3 Testing - UVIS Filtered Throughput.*

Brown, T.M. 2008, *WFC3 Instrument Science Report 2008-07: WFC3 TV3 Testing - UVIS Channel Glints.*

Brown, T.M. 2008, *WFC3 Instrument Science Report 2008-06: WFC3 TV3 Testing - IR Channel Baffle Scatter.*

Brown, T.M. 2008, *WFC3 Instrument Science Report 2008-05: WFC3 TV3 Testing - IR Channel Blue Leaks.*

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Brown, T.M. 2007, *WFC3 Instrument Science Report 2007-23: IR Channel Throughput.*

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Brown, T.M. 2007, *WFC3 Instrument Science Report 2007-20: System Throughput on the UVIS Build 2 Detector.*

Brown, T.M. 2007, *WFC3 Instrument Science Report 2007-18: Image Stability.*

Brown, T.M. 2007, *WFC3 Instrument Science Report 2007-16: IR Channel Ghosts and Baffle Scatter.*

Brown, T.M. 2007, *WFC3 Instrument Science Report 2007-09: UVIS Channel Filter Ghosts after Filter Replacement.*

Brown, T.M. 2007, *WFC3 Instrument Science Report 2007-08: Searching for Scattered Light on the WFC3 UVIS Build 2 Detector.*

Brown, T.M. 2007, *WFC3 Instrument Science Report 2007-07: WFC3 System Throughput on the UVIS Build 2 Detector.*

- Brown, T.M. 2007, *WFC3 Instrument Science Report 2007-06: WFC3 SYNPHOT Data*.
- Brown, T.M. 2006, *WFC3 Instrument Science Report 2006-04: Replacing the F093W Filter with the F140W*.
- Brown, T.M. 2006, *WFC3 Instrument Science Report 2006-03: Filter Throughputs for WFC3 SYNPHOT Support*.
- Brown, T.M. 2005, *WFC3 Instrument Science Report 2005-22: Results of WFC3 Thermal Vacuum Testing - IR Channel Ghosts and Baffle Scatter*.
- Brown, T.M. 2005, *WFC3 Instrument Science Report 2005-18: Results of WFC3 Thermal Vacuum Testing - Repeatability of the Channel Select Mechanism*.
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- Brown, T.M. 2005, *WFC3 Instrument Science Report 2005-01: Results of WFC3 Thermal Vacuum Testing - UVIS Channel Ghosts*.
- Brown, T.M., & Lupie, O. 2005, 2004, *WFC3 Instrument Science Report 2004-12: Ambient Testing of UVIS Filter Ghosts*.
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- Brown, T.M., Lupie, O., Hilbert, B., & Baggett, S. 2003, *WFC3 Instrument Science Report 2003-13: A Throughput Tool for WFC3*.
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